Amendments to the Specification:

Please replace the paragraph beginning on page 7, line 8 with the following rewritten paragraph:

~~Figure 6 is a~~ Figures 6a and 6b are schematic block ~~diagram~~ diagrams showing the signal path for adjusting light intensity due to velocity change.

Please replace the paragraph beginning on page 13, line 15 with the following rewritten paragraph:

For cost-sensitive applications using a large number of imaging channels in printhead 20, pulse width modulation (PWM) techniques are employed to modulate drive current according to the image data. PWM technique drives a fixed current through a channel, but varies the pulse width ratio, or ON time of the current signal. Referring now to an output PWM waveform 160, shown ~~at inset A~~ in Figure ~~6~~ 6b, the ratio of ON time to TOTAL PERIOD time is proportional to a desired effective current level. As an example in ~~inset A of~~ Figure ~~6~~ 6b, PWM waveform 160 shows a PWM pulse that drives about 20% of the fixed current through a channel. Here, the ratio of ON time to TOTAL PERIOD time for PWM waveform 160 is set to 20%.

Please replace the paragraph beginning on page 15, line 7 with the following rewritten paragraph:

Referring ~~again~~ now to Figure ~~6~~ 6a, velocity calculation circuit 135 need only determine and represent the velocity error, that is, the $\varepsilon(t)$ component as, for example, an 8-bit number. Any exposure error due to velocity perturbations $\varepsilon_m(t)$ can then be corrected by modulating the LED current i_{LED} with the constant factor Cv and the time varying factor $(1 + \varepsilon_m(t))$.

Please replace the paragraph beginning on page 15, line 12 with the following rewritten paragraph:

Figure ~~6~~ 6a depicts how an 8-bit representation can be used to correct for velocity exposure errors. The LED current driver consists of PWM MOSFET switch 125 which is controlled by PWM signals proportional to image

data values from data path circuitry 120. A voltage buffer 115 sets the level for a voltage controlled current source 110 which supplies the drive current to an LED 105. The magnitude of LED drive current is proportional to the input level and the transconductance gain K_i of current source 110. The input to voltage buffer 115 is supplied by the output of a summing amplifier 130 whose gain is set to C_v*K_d. The value of C_v is a suitably scaled value representative of the nominal printhead velocity. The factor K_d is introduced to allow further scaling of the drive current. This factor is added to account for the individual characteristics of the LED power output versus current. Usually, K_d is adjusted individually for each channel to bring all LED exposure sources 12 to the same power level for the same code value output, as a PWM waveform from the data path.

Please replace the paragraph beginning on page 15, line 26 with the following rewritten paragraph:

Summing amplifier 130 has three input signals: the input from a multiplying digital-to-analog converter (DAC) 140 at a gain of +2, the input from a voltage divider 150 at a gain of −1, and the input of *Vref* 155 at a gain of 1. Multiplying DAC 140 is a type of D to A converter that outputs a signal proportional to the digital value times a reference input voltage applied to the IN terminal. Voltage divider 150 would typically consist of a potentiometer or fixed resistors. V_{ref} is a stable voltage source whose magnitude is scaled to suitable value for the system.

Please replace the Parts List beginning on page 21 with the following:

72 carriage assembly

105 LED

110 current source

115 voltage buffer

120 data path circuitry

125 switch

130 summing amplifier

135 velocity calculation circuit

140 digital-to-analog converter (DAC)

150 voltage divider

155 Vref

160 PWM waveform

200 counter

205 clock pulse

210 encoder pulse

220 counter output

Please replace the Abstract of the Disclosure found on page 26, line 2 with the following rewritten Abstract of the Disclosure:

A printing apparatus ~~(10)~~ 10 exposes an image onto a photosensitive medium ~~(14)~~ 14, having a printhead ~~(20)~~ 20 with a linear array of exposure sources ~~(40)~~ 40, each exposure source ~~(12)~~ 12 operable at a variable intensity. A shuttle mechanism ~~(16)~~ 16 moves the printhead ~~(20)~~ 20 over the photosensitive medium ~~(14)~~ 14in a reciprocating motion between one end of a carriage assembly ~~(72)~~ 72 and the other. An encoder ~~(38)~~ 38 is coupled to the shuttle mechanism (16) for providing an index encoder pulse ~~(60)~~ 60 at each of a plurality of increments of position of the shuttle mechanism ~~(16)~~ 16 along the carriage assembly ~~(72)~~ 72. Exposure control logic calculates a shuttle velocity according to index signal timing and adjusts the variable intensity of each exposure source ~~(12)~~ 12 according to the shuttle velocity.